

FIG. 1 - Gene Filtering Process

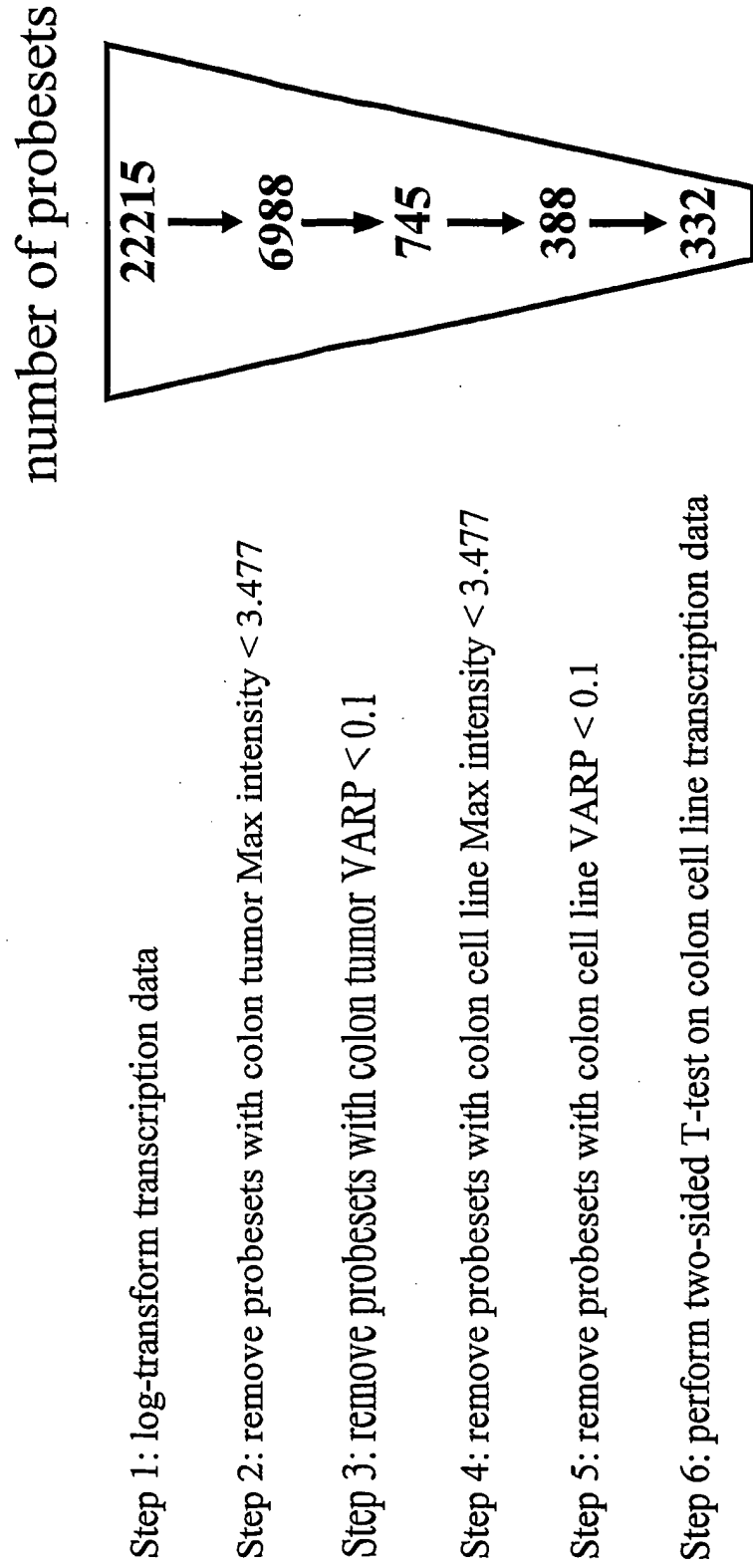


FIG. 2 - Cell Line Filtering Process

Step 1: remove EGFR-negative cell lines

Step 2: remove cell lines with variable response to EGFR inhibitors

Step 3: calculate average IC50 value for erlotinib HCl and gefitinib

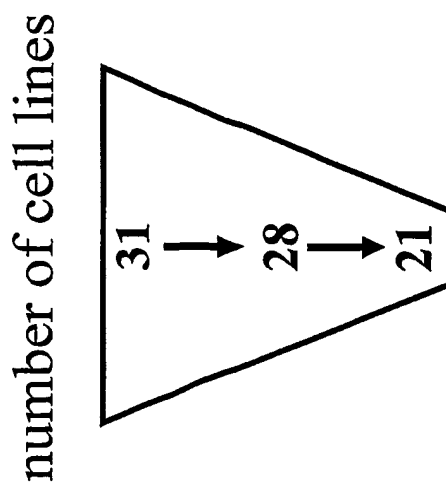


FIG. 3 - Cell Line IC50 data

Sensitive

Cell Line	Avg. IC50 (erlotinib HCl/gefitinib)
Difi	1.0 ()
Lovo	3.0 (2.4/3.6)
Geo	3.6 (3.3/4.2)
CaCo2	5.4 (5.5/5.2)
SW403	6.2 (5.7/6.8)
SW837	7.0 (7.2/6.8)

Resistant

Cell Line	Avg IC50 (erlotinib HCl/gefitinib)
Colo 201	10+ (10+/10+)
Colo 205	10+ (10+/10+)
CX-1	10+ (10+/10+)
HCT-8	10+ (10+/10+)
HT-29	10+ (10+/10+)
SW480	10+ (10+/10+)
T84	10+ (10+/10+)
DLD-1	20 (20/20)
SW1116	20 (23/17)
RKORM13	29 (42/16)
HCT116S542	53 (85/20)
HCT116	67+ (116+/18)
WiDr	67+ (116+/18)
LS1034	68+ (116+/19)
SW948	73+ (116+/29)

Compare

- IC50 < 7 μ M vs. > 10 μ M (6 sensitive vs. 15 resistant)
 - IC50 < 4 μ M vs. > 5 μ M (3 sensitive vs. 18 resistant*)
- (*18 resistant is bottom 3 sensitive (CaCo2, SW403, SW837) and 15 resistant)

FIG. 4 - T-test Results I

Gene	T-test 6-15	T-test 3-18
cadherin 17, LI cadherin (liver-intestine)	0.0004	0.0010
CEACAM6	0.0004	0.0008
CEACAM6	0.0015	0.0014
lectin, galactoside-binding, soluble, 1 (galectin 1)	0.0019	0.0017
transmembrane protease, serine 2	0.0090	0.0087
mucin 5, subtypes A and C, tracheobronchial/gastric	0.0166	0.0298
HMGCoA synthase 2 (mitochondrial)	0.0169	0.0005
interferon-stimulated protein, 15 kDa	0.0204	0.0493
dopa decarboxylase	0.0235	0.0035
SERPINE1	0.0271	0.0313
FXYD domain-containing ion transport regulator 3	0.0271	0.0156
putative integral membrane transporter	0.0439	0.0216

12 Genes with $p < 0.05$ for both comparisons

FIG. 5 - T-test Results II

Gene	T-test 6-15	T-test 3-18
protease inhibitor 3, skin-derived (SKALP)	0.0011	0.1158
caudal type homeo box transcription factor 2	0.0024	0.0573
fibroblast growth factor receptor 3	0.0118	0.0784
hypothetical protein PP1665	0.0141	0.2068
protease inhibitor 3, skin-derived (SKALP)	0.0170	0.2217
A kinase (PRKA) anchor protein (gravin) 12	0.0217	0.0907
lymphocyte antigen 75	0.0234	0.1534
mucin 5, subtypes A and C, tracheobronchial/gastric	0.0250	0.0883
metallothionein 1G	0.0337	0.3549
tumor necrosis factor receptor superfamily, member 6b, decoy	0.0357	0.0931
mucin 3B	0.0384	0.3571
metallothionein 1X	0.0411	0.4250
GRO3 oncogene	0.0413	0.0913
transforming growth factor, beta-induced, 68kD	0.0420	0.3868
bone morphogenetic protein 7 (osteogenic protein 1)	0.0435	0.1995
annexin A10	0.0437	0.1566
metallothionein 1F (functional)	0.0468	0.2643
annexin A1	0.0494	0.5338
secretory leukocyte protease inhibitor	0.0496	0.2271

19 Genes with $p < 0.05$ for 6 Sensitive vs. 15 Resistant

FIG. 6 - T-test Results III

Gene	T-test 6-15	T-test 3-18
polymeric immunoglobulin receptor	0.0535	0.0026
CEACAM 5	0.0609	0.0088
PTP, receptor type, N polypeptide 2	0.0616	0.0106
CFTR, ATP-binding cassette (sub-family C, member 7)	0.0715	0.0027
DVS27-related protein	0.1179	0.0000
insulin-like growth factor binding protein 2 (36kD)	0.2513	0.0081
inhibitor of DNA binding 3	0.2622	0.0112
phospholipase A2, group IIA (platelets, synovial fluid)	0.3361	0.0277
Purkinje cell protein 4	0.4373	0.0000
G protein-coupled receptor 49	0.4415	0.0251
fucosyltransferase 3	0.4451	0.0261
interferon, alpha-inducible protein 27	0.4453	0.0103
SERPIN B5	0.4528	0.0184
Homo sapiens CD44 isoform RC	0.4653	0.0339
solute carrier family 7, member 8	0.4748	0.0309
membrane protein, palmitoylated 1 (55kD)	0.4756	0.0248
tumor protein p53 (Li-Fraumeni syndrome)	0.5178	0.0258
S100 calcium-binding protein P	0.5498	0.0423
SERPIN A1	0.5579	0.0200
eukaryotic translation initiation factor 5A	0.5974	0.0083
old astrocyte specifically induced substance	0.6224	0.0325
UDP glycosyltransferase 1 family, polypeptide A3	0.6251	0.0008
alpha-2-HS-glycoprotein	0.6449	0.0131
ESTs, Highly similar to A39092 glucuronosyltransferase	0.6587	0.0017
UDP glycosyltransferase 1 family, polypeptide A1	0.7178	0.0010
SERPIN A1	0.7266	0.0205
nerve growth factor receptor associated protein 1	0.8525	0.0033
collagen, type XV/II, alpha 1	0.9341	0.0020
collagen, type IX, alpha 3	0.9861	0.0007

29 Genes with $p < 0.05$ for 3 Sensitive vs. 18 Resistant